DECISION MEMO

Corral Creek Beaver Dam Analog

USDA Forest Service, Northern Region
Nez Perce – Clearwater National Forests
Palouse Ranger District
Latah County, Idaho

I. Introduction

After having reviewed relevant data and analyses relating to this proposal, I have decided to install up to 100 beaver dam analogs within the Corral Creek watershed in the Nez Perce-Clearwater National Forests, Latah County, Idaho. The Project area is located in T40N, R1W, Sections 5 and 8, and T40N, R2W Sections 1, 2, 25 and 36 (Boise Meridian). (See attached map.)

II. Purpose and Need

Historic land management practices resulted in degraded watershed function through the Corral Creek tributaries and wetland system. Increased water yield caused higher-than-usual volumes and velocities with flows often captured in the ditches associated with construction of the spur lines. Consequently, many of the Corral Creek tributaries are now incised, with flows seldom getting out of channel into the adjacent meadow/floodplains, flows exiting the meadow/ wetland system too quickly, infiltration and base storage being seriously diminished, ground-water elevations dropping, and woody riparian vegetation being lost.

In addition, the high velocity flows through the straightened channels increase bed and bank erosion, wash any recruited woody debris out of the system (hiding cover for juvenile steelhead), blows out natural beaver dams, reduces productivity of macroinvertebrates, and prevents formation of complex in-channel habitat.

Research has found treatments of degraded systems that restore lateral and vertical connectivity (floodplain access) and restore incised channels by raising the bottom elevation, can make progress toward treating channel incision and improving conditions to improve resiliency in salmon and steelhead populations (Beechie et al 2013). Results of beaver dam analogues in the John Day watershed (Pollock et al 2014) and Scott River Watershed (Yokel et al 2016) include increased floodplain access, raised water table, increased frequency of pools, greater summer base flows, and a significant increase in density, survival, and production of juvenile steelhead.

The current meadow/wetland system does not provide the cool late-season base flows that keep pools full and cool for summer rearing habitat for juvenile steelhead, negatively affecting ESA-listed (threatened) steelhead populations.

The Purpose of the project is to use the analogs to mimic the natural conditions created by beaver dams and their effects on stream geomorphology. The analog structures are designed to function as partial dams that, during moderate flows, will scour pools, redistribute sediment, recruit additional vegetation and organic debris, improve channel complexity, and promote a diversity of substrate and hydraulic conditions for fish spawning/rearing habitat, and for their food sources. Raising the water table will increase the likelihood of successful establishment of native woody plants in the riparian zone. This in turn should encourage re-colonization of these areas by beavers, leading to further improvements across a longer reach over time.

The project will help meet Clearwater National Forest Plan objective (Plan, p. II-5): *Restore selected, presently degraded fish habitat through habitat improvement projects designed to achieve stated objectives.*

Management Area M2 (Riparian Area; Plan, pp. III-68 to III-73)

Goals: Manage ... areas of special consideration, distinctive values, and integrated with adjacent management areas to the extent that water and other riparian dependent resources are protected.

Wildlife and Fish Goal – Remove structures (log jams, etc.) ... identified as fish barriers. Retain those that enhance habitat. Construct new structures to improve or restore degraded habitat.

Water and Soil Goal – Conduct watershed and stream improvements that will:

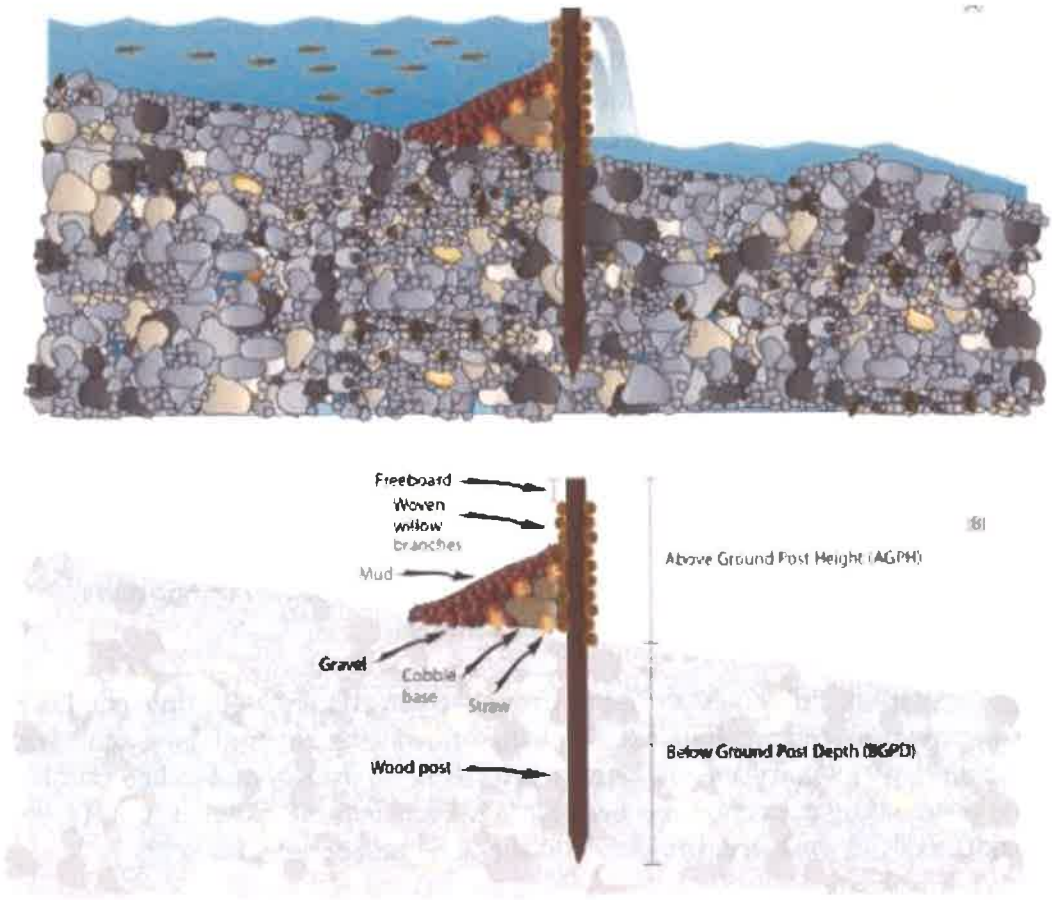
(1) Enhance riparian and water resources.
(2) Rehabilitate and/or mitigate the adverse effects of fire, flood, and other natural or management related causes.

Project Design / Environmental Mitigation

The Latah Soil and Water Conservation District (Latah SWCD), in partnership with the Nez Perce – Clearwater National Forest, proposes to install up to 100 beaver dam analogs within the Corral Creek Watershed. Technical assistance will be provided by a restoration engineer employed by TerraGraphics Environmental Engineering (TGEE). A Latah SWCD planner and the TGEE engineer will identify sites for placement of beaver dam analogues, based on the likelihood that placement will maximize the potential inundation of the floodplain. Analogues will not be located in the vicinity of a road bed or a culvert.

A Latah SWCD field crew will use sledge hammers and a hydraulic post-pounder to install untreated cedar stakes into the channel, spanning it from right bank to left bank. Stakes will be installed in a staggered arrangement and spaced about 1.0 to 1.5 feet apart. The crew will use a mix of rock, soil, and straw, water, and tampers to build and compact a small berm on the channel bottom on the upstream side of the installed uprights (see Figure 1 below). Using hand saws, chain saws, clippers, and pruners the crew will trim lower limbs from nearby conifers, and branches from nearby willows and red-osier dogwoods. The limbs and branches will then be woven through the uprights to form a semi-permeable structure in the channel to slow flows and push water out onto the floodplain. Following construction the crew will seed and mulch any disturbed ground on the floodplain.

Figure 1: Side-view sketches of a Beaver Dam Analogue



All permits required for disturbance of water or wetlands (e.g. Army Corps of Engineers 404 permit, Idaho Department of Water Resources Stream Alteration Permit) will be obtained prior to initiating project work.

The instream work window for the project will be from July 15 to September 30 in compliance with the Programmatic Biological Opinion for Habitat Restoration Projects in Idaho (USFWS 01EIFW00-2014-F-0456, NMFS No. 2014/832).

Design Criteria include:

- A safe working environment will be maintained at all times.
- All personal protective clothing and equipment, such as gloves, earplugs, etc., shall be worn and used during operations.
- All equipment and vehicles will be thoroughly cleaned to prevent the introduction or spread of noxious weeds.
- No vehicles, trailers, or carts on saturated soils.
- Re-seed, mulch, or otherwise rehabilitate disturbed areas. Seed and mulch must be weed-free.

- Take all reasonable precautions to prevent pollution of air, soil, and water from operations.
- Maintain all equipment operating in good repair and free of substantial leakage of lubricants, fuel, coolants, and hydraulic fluid.
- Petroleum product storage containers will be located no closer than 300 feet to stream, watercourse, or area of open water when not actually being used for refueling or other maintenance.
- Work crew/contactor shall not service equipment on National Forest lands where servicing can result in hazardous material transmission to streams or other water bodies.
- A spill kit will be onsite for fuel spills.
- Work crew/contractor shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources.
- Work crew/contractor shall remove from National Forest lands all contaminated soil, vegetation, debris, oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.
- In the event that Work crew/contractor's Operations or servicing of equipment result in pollution to soil or water, Work crew/contractor shall conduct cleanup and restoration of the polluted site to the satisfaction of Forest Service.

Project Implementation: Tributaries to Corral Creek are intermittent, with flow conditions depending on snowpack and precipitation. Typically, flows cease by mid-July, and normally don't resume until after significant and lengthy precipitation, usually mid to late October. The work will be done during dry conditions between mid-July and mid-October in 2017 and 2018, with the majority of the work occurring in August and September of each year.

III. Rationale for Decision and Reasons for Categorically Excluding the Decision

A. Category of Exclusion and Rationale for Using the Category

Based on information in this document and the project record, I have determined this project is not significant in either context or intensity (40 CFR 1508.27), that no extraordinary circumstances affecting resource conditions exist (36 CFR 220.6), that this project may be categorically excluded from documentation in an EA or EIS, and that it meets all the criteria outlined in 36 CFR 220.6(e)(18): *Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing or modifying water control structures such as, but not limited to, dams, levees, dikes, ditches, culverts, pipes, drainage tiles, valves, gates, and fencing, to allow waters to flow into natural channels and floodplains and restore natural flow regimes to the extent practical where valid existing rights or special use authorizations are not unilaterally altered or canceled.*

The rationale for my decision is based on: (1) the proposed action fully meeting the criteria for Categorical Exclusions, (2) the proposed action meeting the purpose and need, (3) the findings related to extraordinary circumstances, discussed below, (4) the project's consistency with laws and regulations, (5) the on-the-ground review and discussion with District resource specialists, and (6) my review of the Biological Assessments (BA), Biological Evaluations (BE), and specialists' reports.

B. *Finding of the Absence of Significant Adverse Effects to Extraordinary Circumstances*

1. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat or Forest Service sensitive species.

The Forest Interdisciplinary (ID) Team Botanist determined the project would have "no effect" to federally listed plant species and/or their habitats. The project may impact sticky goldenweed and Douglass clover, Regional Forester's sensitive species. The project would likely have beneficial impacts as improved hydrologic conditions created by the action would improve or increase habitat for both species.

The ID Team Wildlife Biologist determined the project would have "no effect" to Canada lynx nor result in "jeopardy" to North American wolverine or their habitats. Forest Sensitive Species may be present; however, the project would not impact suitable sensitive species habitat. Project-related disturbance could cause individuals to avoid the area during implementation. Any effects would be temporary at individual sites, and habitat adjacent to the area of disturbance is available for dispersal.

The North Zone Fish Biologist determined the proposed actions would have "no effect" on bull trout and fall chinook, federally threatened species, because the species and designated critical habitat are not located within the project area. Snake River steelhead, a federally threatened species, may be present in the upper Potlatch River drainage. The project, however, would not adversely affect individual steelhead or steelhead critical habitat and would likely benefit the species and habitat over the long-term. The project is designed to comply with all Terms and Conditions and Design Criteria in the Programmatic Biological Opinion for Habitat Restoration Projects in Idaho (USFWS 01EIFW00-2014-F-0456, NMFS No. 2014/832).

Spring Chinook salmon, Pacific lamprey, and western pearlshell mussel and their habitats may be present in the upper Potlatch River drainage; however project activities would have no impacts on the species or their habitat because they are not known to occur in the intermittent (i.e., project area) portion of the Corral Creek drainage.

Based on the above assessment, no effects exist that will cause an incremental cumulative effect and no extraordinary circumstances were identified for these resources. For the complete analyses, see the Fishery, Wildlife and Botany Biological Assessments and Evaluations and specialists' reports in the project record.

2. Floodplains, wetlands, or municipal watersheds.

The Forest Hydrologist determined the project would have beneficial effects to floodplains and wetlands. There are no municipal watersheds in the project area. Cumulative effects (if any) would be most noticeable at the site scale, becoming progressively less discernible at the sub-watershed, watershed, and sub-basin scales. Given the low degree of anticipated site-level effects, cumulative effects are expected to be negligible.

The project is consistent with all applicable State and Federal water quality laws because project design criteria and best management practices (BMPs) have been included to protect water

resources. Although the project is located within several Riparian Conservation Habitat Areas (RHCAs), the proposed actions are expected to benefit the RHCAs by restoring channel, meadow, and riparian conditions.

Based on this analysis, no extraordinary circumstances were identified regarding the effects to water quality of streams within the area; downstream waters; or resources in floodplains, wetlands, and municipal watersheds; thereby complying with EO 11988, EO 11990, and FSH 1909.15 Chapter 31.2.2.

3. Congressionally designated areas, such as wilderness, wilderness study areas or national recreation areas.

The project is not located in a wilderness, wilderness study area or national recreation area.

4. Inventoried Roadless areas or potential wilderness areas.

The project is not located in a roadless area or potential wilderness area; therefore, the proposed action will have no effect on Roadless characteristics as identified in 36 CFR 294.

5. Research Natural Areas.

The project is not within or adjacent to any Research Natural Areas.

6. American Indians and Alaska native religious or cultural sites.

The Nez Perce Tribe did not identify any religious or cultural concerns for the project. The Forest Cultural Resource Specialist has therefore determined the above project has little likelihood to adversely affect cultural properties. As a result, a *No Inventory Decision* has been made, and there are no extraordinary circumstances identified to native religious or cultural sites.

7. Archaeological sites or historical properties or areas.

The Idaho State Historic Preservation Officer, or the Forest Archaeologist via the use of the North Idaho Programmatic Agreement, has determined that no archaeological or historic property will be adversely affected by this project. Therefore, no extraordinary circumstances were identified to these resources

IV. Interested and Affected Agencies, Organizations, and Persons Contacted

The proposed action – installing Beaver Dam Analogs to mimic conditions created by beaver dams – is considered limited in context and intensity, and therefore scoping was conducted internally on the Nez Perce-Clearwater National Forests. The Small NEPA Interdisciplinary Team was scoped on October 11, 2017 with no significant effects or extraordinary circumstances identified.

V. Findings Required by other Laws

Based on my review of the actions associated with this project, I find that the Corral Creek Beaver Dam Analog Project is consistent with applicable Federal, state and local laws and

regulations, including the standards and guidelines contained in the 1987 Clearwater National Forest Plan, as amended, as required by the National Forest Management Act of 1976.

VI. Contact Person

Questions regarding this decision should be sent to Jeff Chynoweth, Small NEPA Team Coordinator, c/o Nez Perce–Clearwater Supervisor's Office, 903 Third Street, Kamiah, Idaho 83536 or by telephone to (208) 935-4260 or FAX at (208) 935-4275 during business hours (M-F, excluding Federal holidays, 7:30 a.m. to 4:30 p.m., PST).

VII. Signature of Deciding Officer

Stefani L. Spencer — 10/23/2017

STEFANI L. SPENCER
Palouse District Ranger

Date

cc: Eric Crook, Anne Connor

Enclosures (1): Map

Map of Corral Creek Beaver Dam Analog Project